

25th Anniversary Symposium

Support. Equip. Empower.

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Assessment Specialist/CAPTEC Manager

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March 29, 2015

Providing Accommodations for 25 Years

- CAP was established in FY 1990 as a centrally funded program to provide accommodations to employees of the Department of Defense (DoD)
- CAP was expanded in 2000 to support other federal agencies
  - 69 federal agencies have partnership agreements with CAP
  - CAP has provided over $17M in assistive technology to non-DoD agencies
  - DoD/CAP receives no funding from our partners
- CAP was further expanded in 2005 to support wounded, ill and injured military personnel
- CAP's Mission:

Provide assistive technology and accommodation to support individuals with disabilities and wounded, ill and injured Service members throughout the Federal Government in accessing information and communication technology.



CAP's Leadership & Staff



Stephen M. King
Director



Sharon Terrell-Lindsay
Deputy Director

Assessment Team

Mark Rew
Michael Young
Jeffrey Dallos
Jerome D. Lyons

Acquisitions Team

Kameelah Montgomery
Ryan Heist



Support. Equip. Empower.

"We are in the people business. We **SUPPORT** people, we support agencies. We **EQUIP** people and agencies, and by doing so we **EMPOWER** individuals with disabilities and wounded, ill and injured Service members to be able…to be successful in whatever they decide to do."

- Stephen M. King, CAP Director on Federal News Radio, October 17, 2014





The Needs Assessment Process

The Individual

- Determine if it is an existing or newly acquired disability (Diagnosis & Prognosis)
- Discuss functional limitations
- Familiarity & comfort level with AT and IT
- Current/future health care *and* career plans
- How does diagnosis impact/limit ability to perform daily tasks



The Position

- What are typical tasks during the day? (MTF/Home/Telework)
- Identify the individual's job tasks and duties
- What are the specifications of the computer/job functions?





The Needs Assessment Process

The Solution

- Define the procedures for installing software on your network to include security and integration
- Determine if the individual needs training on the proposed solutions
- Recommend assistive technology solutions based on the individual's needs
- Feedback/Follow-up (Agency vs CAP scope)







Assistive Technology



Dexterity

- Alternative keyboards, input devices and voice recognition software

Vision

- Screen readers, Braille terminals, magnification software and closet circuit televisions (CCTVs)



Hearing

- Assistive listening devices (ALDs), TTYs, videophones and captioning services



Cognitive/TBIs

- Cueing and memory aids, literacy software, screen readers and ALDs

Dexterity

Dexterity limitations are conditions that impact the range of motion and include:

- Carpal Tunnel Syndrome, tendonitis, and arthritis
- Multiple Sclerosis and Cerebral Palsy
- Quadriplegia and Paraplegia
- Upper extremity amputations



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Dexterity: Potential Solutions

- Alternative keyboards and pointing devices
- Keyboard trays and document holders
- Speech recognition software and training
- Headsets and handsets
- Sit to Stand Workstations (DoD employees *ONLY*)







Vision



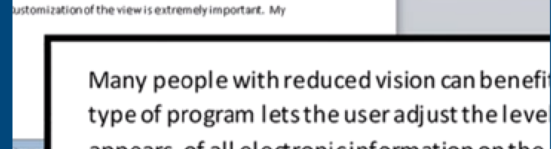
Vision limitations are conditions that impact vision and include:

- Myopia (Nearsightedness) and Hyperopia (Farsightedness)
- Glaucoma
- Cataracts
- Macular Degeneration
- Retinopathy
- Blindness



Vision: Potential Solutions

- Voice output
  - Screen reading software
  - Scanner/Readers
- Braille devices
  - Terminals
  - Embossers
- Portable notetakers
- Print enlargers
  - Closed circuit televisions (CCTVs)
  - Screen magnification software



which I can customize and place anywhere on the screen.





Hearing



Hearing limitations are conditions that impact hearing and include:

- Hard of hearing
- Otosclerosis
- Tinnitus
- Deafness

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Hearing: Potential Solutions

- Assistive listening and amplification devices
- Video communication devices for video relay services
- Amplified and voice carry over telephones
- Telephone ring signalers
- Teletypewriters (TTYs)
- Closed captioning equipment for videos (produced in-house)





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Cognitive and Learning

Cognitive and learning limitations are conditions that impact brain functions and including:

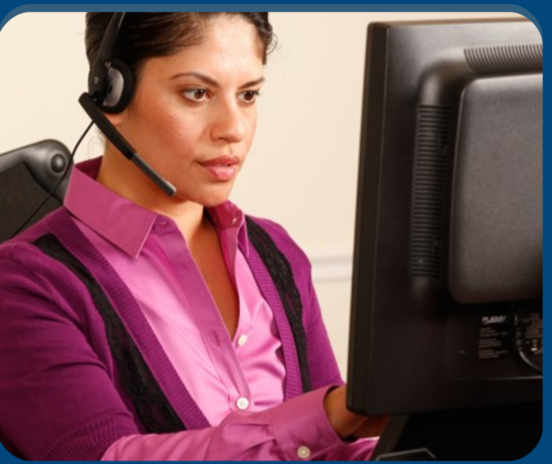
- Dyslexia
- Attention Deficit Hyperactivity Disorder (ADHD)
- Traumatic Brain Injury (TBI)
- Stroke
- Alzheimer's Disease



Cognitive and Learning: Potential Solutions

- Literacy software
- Speech recognition software
- Educational software
- Screen readers
- Cueing and memory aids
- Assistive listening devices
- Noise-cancelling headphones







Communication

Communication limitations are conditions that disrupt the communication process and include:

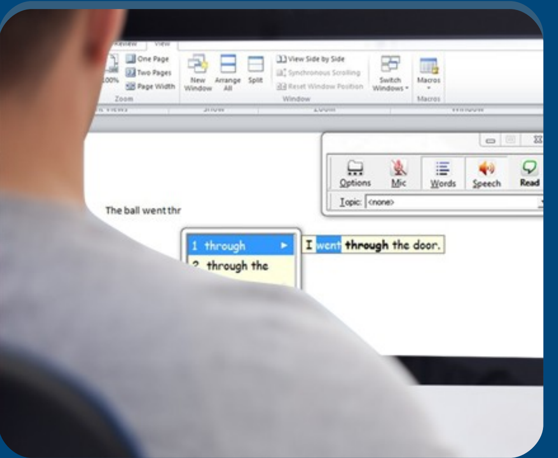
- Central auditory processing disorders
- Voice and fluency disorders
- Articulation disorders



Communication: Potential Solutions

- Voice amplifier
- Word prediction software
- Augmentative communication devices







CAP CASE STUDIES

Dexterity Impairments: Case Study 1

Diagnosis

- Cervicalgia

Limitations

- Constant pain in neck and upper back
- Numbness in dominant arm/hand

Requirements

- Contracting specialist

Solutions

- Alternative keyboard and pointing device
- Copy holder
- Telephone headset



Dexterity Impairments: Case Study 1

- Alternative keyboard
  - Keys more easily accessible with one hand
- Alternative pointing device
  - Controls at midline eliminate lateral reaching
  - Controls accessible with open, neutral hand







Dexterity Impairments: Case Study 1

- Document holder
  - Hard copies at midline, eliminating head turning
- Telephone headset
  - Eliminates reaching for handset
  - Eliminates ‘cradling’ handset against shoulder







Dexterity Impairments: Case Study 2

Diagnosis/Limitations

- Loss of non-dominant upper extremity
- Limited ROM in upper extremity
  - Unable to raise arm above shoulder level
  - Diminished capability for lateral movement of arm

Requirements

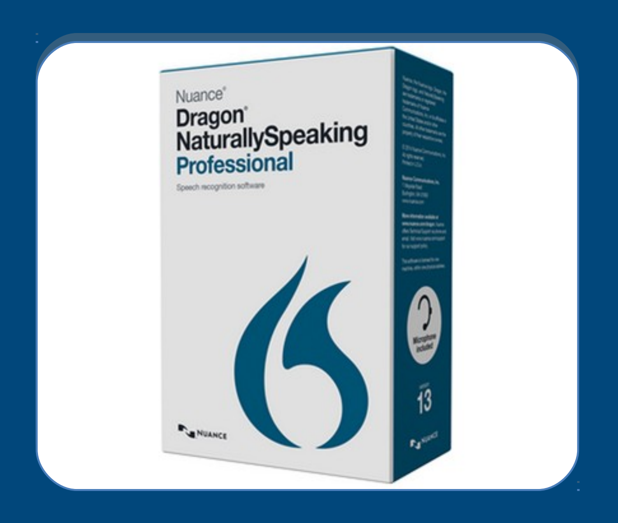
- Program Analyst
- Needs to attend meetings, capture information, and produce summaries



Dexterity Impairments: Case Study 2

Solutions

- Voice recognition software
  - All input to the computer
- Array microphone
  - Eliminated need for assistance with headset







Dexterity Impairments: Case Study 2

Solutions

- Digital voice recorder
  - Record notes from meetings in his own voice
  - Download notes to computer
  - Voice recognition software converts notes to text





Visual Impairments: Case Study 3

Diagnosis

- Ocular nerve incompletely developed

Limitations

- Blurry vision
- Headaches from eye strain and photosensitivity

Status

- Executive Assistant

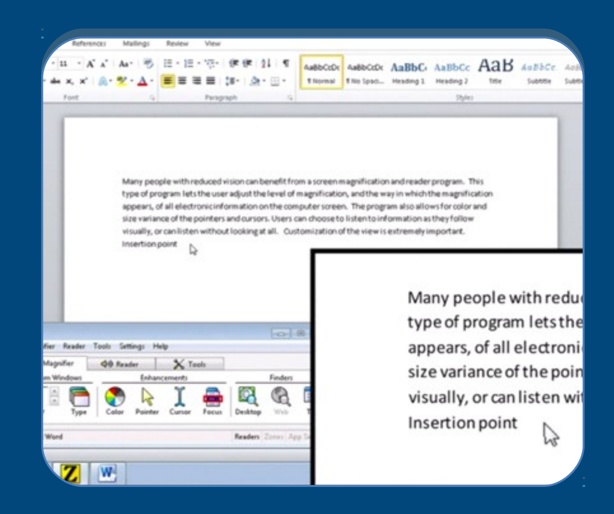
Solutions

- Screen magnification with voice output
- Desktop CCTV
- Portable CCTV for in-class use



Visual Impairments: Case Study 3

- Screen magnification software
  - Increases size of electronic images
  - Color customization
  - Document and application readers
- Desktop CCTV
  - Magnification/color options for hard-copy
  - For stationary use







Visual Impairments: Case Study 3

- Portable CCTV
  - Hard-copy enhancement
  - Portable for multiple environments





Cognitive Impairments: Case Study 4

Diagnosis

- Service member with Traumatic Brain Injury from IED Blast
- 70% Frontal Lobe Damage

Limitations

- Short and Long Term Memory Loss
- Decreased concentration and attention
- Word comprehension deficits

Status

- Attempting COAD and continuing education
- Online classes

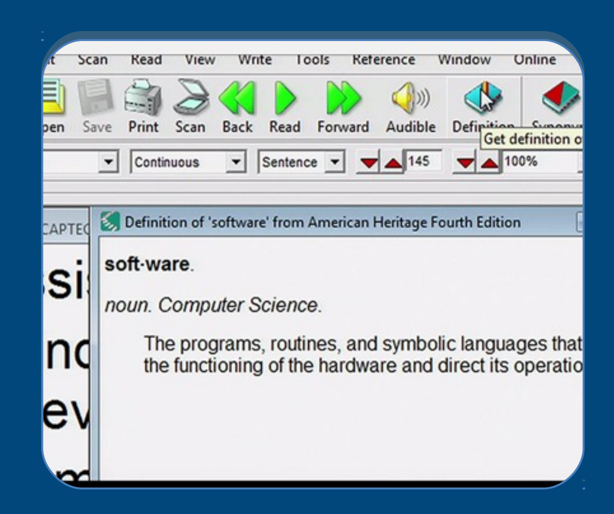
Solutions

- Literacy Software
- Scanner
- Portable Memory Cueing Device with Scheduling Application

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Cognitive Impairments: Case Study 4

- Literacy Software
  - Dictionary
  - Masking features
  - Document and application readers
- Scanner
  - Options for hard-copy
  - Convert to text for notes







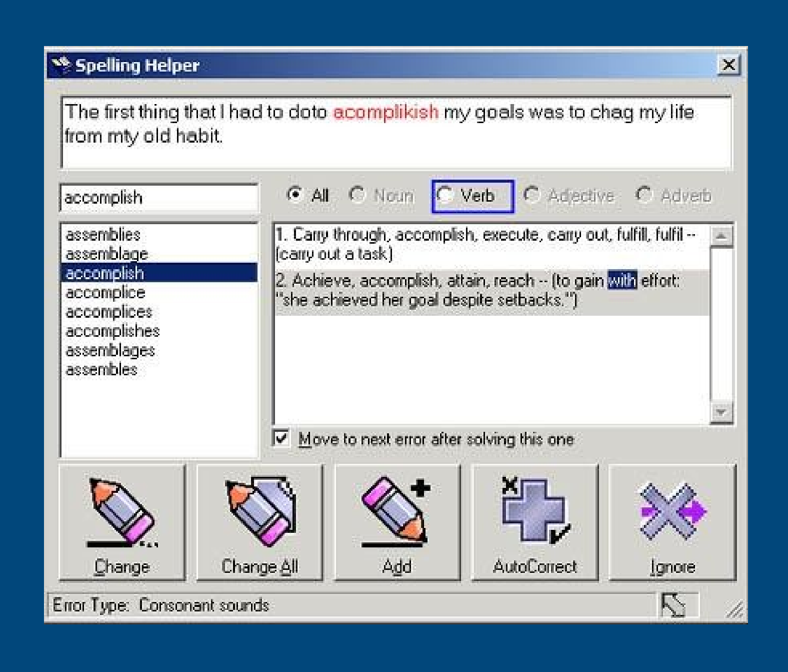
Cognitive Impairments: Case Study 4

- Cueing Device with Schedule Application
  - Recording capabilities w/ auditory and visual cues
  - Step by step instructions
  - Can be customized to personal tasks





Cognitive AT: Focus on Literacy Software



- User can control how text or verbal information is presented
- Variable highlighting and masking of text
- Text, cues, dictionaries, and prompts can be read aloud
- Applicable to existing electronic documents
- Hard copy information can be scanned then accessed
- Demonstration video: http://www.cap.mil/newsevents/Training/productMaterials.aspx



Hearing Impairments: Case Study 5

Diagnosis

- Mild hearing loss across all frequencies

Limitations

- Difficulty hearing on telephone

Status

- Program Director
- Land-line and cell phone use
- Needs to be reachable while mobile

Solutions

- In-line amplifier
- Cell-phone amplifier



Hearing Impairments: Case Study 5

- In-line amplifier
  - Amplification adjustable per rar
  - Amplification adjustable per cal
  - Usable on land-line phones
- Cell-phone amplifier
  - Adjustable amplification
  - Monaural or binaural
  - Cell-phone brand specific







Changes in CAP Scope

- Changes made to CAP scope effective July 10th, 2015 impact:
  - Ergonomic Chairs
  - Sit to Stand Workstations
  - Interpreting and CART Services
  - Assistive Technology Training



Temporary Disabilities

CAP can provide assistive technology to DoD employees who have a disability that is not permanent in nature

- DoD personnel *ONLY*
- Documentation may be required to verify the need and maintain acquisition integrity
    - does not have to state that condition will affect them for a certain timeframe to qualify



CAP Technology Evaluation Center (CAPTEC)



- Assist customers in choosing the appropriate computer and electronic accommodations
- Demonstrate a wide variety of assistive technology
- Located at the Pentagon, Room 2D1049
  - VTC capability
  - Tours
- To schedule a visit:
  - 703-693-5160 (V)
  - 703-693-6189 (TTY)
  - Email: cap.captec@mail.mil

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